

NOTE ON THE

EXISTENCE OF GIGANTIC SEA-ANEMONES

IN THE CHINA SEA,

CONTAINING WITHIN THEM QUASI-PARASITIC FISH.

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THE most remarkable circumstance which I met with when wading upon a submerged reef in the China Sea was the discovery of some Actiniae of enormous size, and of habits no less novel than striking. I observed in a shallow spot a beautiful large convoluted mass, of a deep blue colour, which, situated as it was in the midst of magnificent corals of every colour of the rainbow, I supposed also to be a coral; but its singular aspect induced me to feel it, when the peculiar tenacious touch of a sea-anemone made me rapidly withdraw my hand, to which adhered some shreds of its blue tentacles. I then perceived that it was an immense Actinia, which when expanded measured fully 2 feet in diameter. The tentacles were small, simple, and very numerous, of a deep blue colour; and the margin of the tentacular ridge was broad and rounded, and folded in thick convolutions concealing the entrance to the digestive cavity.

While I was standing breast-high in the water, admiring this splendid specimen, I noticed a very beautiful little fish, which hovered in the water close by, and nearly over, the Anemone. The little fish was 6 inches long, the head bright orange, and the body vertically banded with broad rings of opaque white and orange alternately, three bands of each. As the fish remained stationary, and did not appear to be alarmed at my movements, I made ineffectual attempts to catch him; he always eluded my efforts, not darting away, however, as I expected he would, but always returning to the same spot. Wandering about in search of shells and animals, I returned from time to time to the great Anemone, and each time I found the fish there, in spite of all my disturbance of it. This singular persistence of the fish in keeping to the same

spot, and to the close vicinity of the great Anemone, aroused in me strong suspicions of the existence of some connexion between them.

These suspicions were subsequently verified; for on the reefs of Pulo Pappan, near the island of Labuan, I met with more than one specimen of this gigantic Actinia, and the fish, so unmistakeable in its appearance when once seen, again in its neighbourhood. Raking about with a stick in the body of the Anemone, I by degrees dislodged six fishes of the same species, and of various sizes, from the cavity of the zoophyte; and this time, being provided with a hand net, I had no difficulty in capturing them all. Thus the connexion existing between the fish and the Anemone was demonstrated, though what is the nature and object of that connexion remains to be proved.

There are at least two species of these Anemone-inhabiting fish; and a second species of the same genus differs from that just described in having black and cream-coloured vertical bands, instead of orange and white. Such a fish I have seen, evidently closely related to the first described, in the possession of Mr. Hugh Low, of Labuan, who in times past had made many excursions to the reefs, and had become acquainted with this fact. Mr. Low had it then living in a tub which did duty as an aquarium, having obtained it some months before from the body of what was probably a second species of fish-sheltering Anemone. The fish was remarkably lively and knowing, and lived in good health in the tub for several months—a proof that the connexion between these animals, whatever its nature, is not absolutely essential, for the fish at least.

It has long been known that there is a *Holothuria* (*H. ananas*) which harbours a parasitic fish. The *Holothuria* and its fish are figured in the 'Voyage of the Astrolabe;' and such a *Holothuria* inhabits the reefs about Labuan; but its fish bears no resemblance to those I have described, not indeed belonging to the same piscine family.

But the saddest part remains to be told. The six fishes having been secured as above, I made no drawing or description of them, but placed them in spirits and transmitted them home with other specimens. From some fault probably in the spirits, these fishes were totally destroyed before arriving in England, although, with the exception of some other fishes, the rest of the specimens were in tolerable order. I trust, however, that, as I know precisely where they are to be found, I shall be able to procure new specimens from the same spot.